AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE J	PAGE OF PAGES 1 4

2. AMENDMENT/MODIFICATION NO. 0003	3. EFFECTIVE DATE 14-Aug-2003	4. REQUISITION/PURCHASE REQ. NO. W16ROE-3183-8070	5. PROJECT NO.(If applicable)

6. ISSUED BY   CODE   DACW51

USA ENGINEER DISTRICT, NEW YORK
ATTN: CENAN-CT ROOM 1843
26 FEDERAL PLAZA (DACW51)
NEW YORK NY 10278-0090

7. ADMINISTERED BY (If other than item 6)   CODE

See Item 6

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)

X	9A. AMENDMENT OF SOLICITATION NO. DACW51-03-B-0015
X	9B. DATED (SEE ITEM 11) 23-Jul-2003
	10A. MOD. OF CONTRACT/ORDER NO.
	10B. DATED (SEE ITEM 13)

CODE   FACILITY CODE

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer [ ] is extended, [X] is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:
(a) By completing Items 8 and 15, and returning __1__ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

A.	THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
B.	THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).
C.	THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
D.	OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The purpose of this amendment is to make the following changes/clarifications to the solicitation Drawings and Specifications for Pompton Lake Dam, Flood Protection Project. Bid Opening Date remains 28 Aug 2003 2:00 P.M.
See attached revised Bid Schedule.

Bidders must acknowledge receipt of this amendment by the date specified in the solicitation (or as amended) by one of the following methods: By signing Block 15 below, by separate letter, or by telegram. FAILURE TO ACKNOWLEDGE AMENDMENTS BY THE DATE AND TIME SPECIFIED MAY RESULT IN REJECTIONS OF YOUR BID IN ACCORDANCE WITH THE LATE BID, LATE MODIFICATION OF BIDS, OR LATE WITHDRAWAL OF BID (FAR 14.304).

All other terms and conditions remain the same.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
	TEL: EMAIL:	
15B. CONTRACTOR/OFFEROR 15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY	16C. DATE SIGNED 19-Aug-2003
(Signature of person authorized to sign)	(Signature of Contracting Officer)	

EXCEPTION TO SF 30
APPROVED BY OIRM 11-84

30-105-04

STANDARD FORM 30 (Rev. 10-83)
Prescribed by GSA
FAR (48 CFR) 53.243

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

The following have been added by full text:
    AMENDMENT 3
Bid opening hour and date remain unchanged (28 August 2003 @ 02:00 P.M.).

1. The following changes shall be made to the specifications:

Specifications

1. Section 01311, Project Schedule Bar Chart has been deleted in its entirety.

2. Section 01320, Project Schedule: Network Analysis System has been added in its entirety.

3. Section 05120, para 2.1 – Delete in its entirety and replace with paragraph below:

    " For all structural steel with a FCM (Fracture Critical Member) designation, use the supplementary requirement of ASTM A 709, 584 Zone 2 of table 51.3."

4. Section 02049, para, 3.3.3. Delete in its entirty and replace with new paragraph below:

3.3.3 Time Extensions and Damages

This paragraph provides for relief in the event of a flood which overtops elevation 206.0 NGVD of the completed and installed cofferdam (including sandbagging), provided that flooding of the protected area was not caused through fault or negligence of the Contractor or misuse, abuse or failure to maintain the cofferdam structure. In the event the cofferdam is expected to be overtopped at elevation 206.0 NGVD, as approved by the COR, the costs for demobilization, mobilization, flooding, pumping and subsequent restoration of the cofferdam area and downstream area are provided for in bid item No. 0002.

No extension of time will be granted for repairs for flooding the area, clean-up, unwatering, and damage to the permanent work and cofferdam should the flooding be caused by fault or negligence on the part of the Contractor or by his misuse, abuse or failure to maintain the cofferdam structure. No extension of time will be granted for damage to foundations and structures caused by malfunctioning of the unwatering system. The Contractor shall be responsible for all damages, including foundation damage, caused by flooding or by uplift within the protected area resulting from any malfunction or slow-down of the unwatering system, and any pumping resulting from malfunctioning of the unwatering system shall be at the Contractor's expense The Contractor shall be responsible for and shall repair without cost to the Government, any damages to the cofferdam, foundations, and/or permanent work, including pumping out of the protected area, that may result from his negligence or misuse or failure to maintain the cofferdam structure or unwatering system.

Damage to the cofferdam, foundations, and permanent work resulting from river stages exceeding the design stage for the cofferdam shall be repaired by the Contractor as directed by the Contracting Officer. Payment will be made unless the damage was due to fault or negligence of the Contractor. The costs for each approved event is provided herein as follows:

a. Preparation of the hole for flooding to include demobilization, preparation of the demolition area, covering the permanent work with plastic and temporary wood sheathing, flooding the cofferdam, dewatering the cofferdam, removal of all temporary measures, removal of all debris, cleaning and pressure washing of all areas; restoration of scaffolds, shoring, pumps, templates, sand dikes and gages to their original condition; and all costs to initiate and restore the work area to its pre-flood condition. In addition to the lump sum price provided for each event, a time extension of 10 calendar days associated with each event is hereby provided in accordance with Section 00800, paragraph 17, Time Extensions for Unusually Severe Weather.

b. Repairs to the permanent work will be negotiated under the CHANGES CLAUSE of the contract in Section 00700. At the time that the flood event has passed, the COR will inspect and prepare a request for proposal for all permanent work damaged in the flood event provided it was properly protected with plastic and sheathing as prescribed in paragraph a. above.

5. Bid Schedule: Replace the Bid Schedule with the new bid schedule and notes below:

SECTION 00010 - SOLICITATION CONTRACT FORM

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Lump Sum		
	CONTRACT FOR POMPTON DAM CONSTRUCTION RAMAPO @ OAKLAND				

NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002		4	Each		
	Cofferdam Overtopping				

NET AMT

Total Amount $_____

Notes

1.   Item No. 0002, Cofferdam Overtopping, may not be used unless directed by the contracting officer or the contracting officer's representative (COR). In the event the contracting officer or the contracting officer's representative (COR) does not use any and /or all of the unit (s) in Item No. 0002, the amount or cost of these unit (s) shall be credit to the Government.

6.   This amendment shall be attached to the specifications and shall be a part thereof.

(End of Summary of Changes)

SECTION 01320

PROJECT SCHEDULE:
NETWORK ANALYSIS SYSTEM
(NYD Rev. 2/03)

PART 1   GENERAL

1.1   SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

   SD-07 Schedules

Initial Project Schedule; GA. Preliminary Project Schedule;
GA. Periodic Schedule Updates; GA.

   Four copies of the schedules showing codes, values, categories, numbers, items, etc., as required.

   SD-08 Statements

Qualifications; FIO.

   Documentation showing qualifications of personnel preparing schedule reports.

   SD-09 Reports

Narrative Report; FIO. Schedule Reports; FIO.

   Four copies of the reports showing numbers, descriptions, dates, float, starts, finishes, durations, sequences, etc., as required.

1.2   QUALIFICATIONS

The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports. This person shall have previously created and reviewed computerized schedules. Qualifications of this individual shall be submitted to the Contracting Officer for review with the Preliminary Project Schedule submission.

PART 2   PRODUCTS (Not Applicable)

PART 3   EXECUTION

3.1   GENERAL

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS a Project Schedule as described below shall be prepared. The Contractor shall be responsible for scheduling of all procurement and construction activities as well as design activities if applicable to the project. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project should also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2   BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel shall result in an inability of
the Contracting Officer to evaluate Contractor progress for the purposes of payment. Failure of the Contractor to provide all information, as   specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, then the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

3.3   PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. Manual methods used to produce any required information shall require approval by the Contracting Officer.

3.3.1   Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in either the Precedence Diagram Method (PDM) or the Arrow Diagram Method (ADM).

3.3.2   Level of Detail Required

With the exception of the initial and preliminary schedule submission, the Project Schedule shall include an appropriate level of detail. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule. The Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the Project Schedule.

3.3.2.1   Activity Durations

Contractor submissions shall be required to follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods. A rule of thumb, that the Contractor should use, is that less than 2 percent of all non-procurement activities' Original Durations shall be greater than 20 days.

3.3.2.2 Design and Permit Activities- The Contractor shall integrate design and permitting activities, including necessary conferences and follow-up actions and design package submission dates into the schedule if these items are applicable to the project.

3.3.2.3   Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing.

3.3.2.4   Government Activities

Government and other agencies activities that could impact progress shall be shown. These activities include, but are not limited to: approvals, inspections, utility tie-in, Government Furnished Equipment (GFE) and notice to proceed for phasing requirements.

3.3.2.5 Workers Per Day
     All activities shall have an estimate of the average number of workers per day that are expected to be used during the   execution of the activity to produce the expected completion date.   If no workers are required for an activity, in the case of activities related to procurement, for example, then the activity shall be identified as using zero workers per day. The workers per day information for each activity shall be identified by the Workers Per Day Code.

3.3.2.6   Responsibility

All activities shall be identified in the project schedule by the party responsible to perform the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task. Activities shall not belong to more than one responsible

party. The responsible party for each activity shall be identified by the Responsibility Code.

3.3.2.7   Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area. The work area of each activity shall be identified by the Work Area Code.

3.3.2.8   Modification or Claim Number

Any activity that is added or changed by contract modification or used to justify claimed time shall be identified by a mod or claim code that changed the activity. Activities shall not belong to more than one modification or claim item. The modification or claim number of each activity shall be identified by the Mod or Claim Number.

3.3.2.9   Bid Item

All activities shall be identified in the project schedule by the Bid Item to which the activity belongs. An activity shall not contain work in more than one bid item. the bid item for each appropriate activity shall be identified by the Bid Item Code.

3.3.2.10   Phase of Work

All activities shall be identified in the project schedule by the phases of work in which the activity occurs. Activities shall not be allowed to contain work in more than one phase of work. The project phase of each activity shall be by the unique Phase of Work Code.

3.3.2.11 Category of Work   All Activities shall be identified in the project schedule according to the category of   work which best describes the activity. Category of work refers, but is not limited to, the procurement chain of   activities including such items as submittals, approvals, procurement, fabrication, delivery, installation, start-up,   and testing. The category of work for each activity shall be identified by the Category of Work Code.

3.3.2.12   Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to a work breakdown structure for the project. The feature of work for each activity shall be identified by the Feature of Work Code.

3.3.2.13 Critical Activities.

In addition to other activities as required to complete the project, the Progress schedule shall include the following as separate line activities:

a. Submission and approval of mechanical/electrical layout drawings.
b. Submission and approval of O & M Manuals.
c. Submission and approval of as-built drawings.
d. Submission and approval of 1354 data and installed equipment lists.
e. Submission and approval of HVAC Testing and Balancing plan.
f. HVAC Testing and Balancing and submission and approval of report.
g. Submission and approval of HVAC Commissioning plan.
h. HVAC Commissioning.
i. Other Systems testing as required.
j. Warranty Action Preparation
k. Pre-final inspection.
l. Correction of punchlist for pre-final inspection.
m. Final inspection.

3.3.2.14. HVAC Testing, Balancing and Commissioning. If this contract contains requirements for Heating, Ventilation and Air Conditioning Testing and Balancing and Commissioning, these activities must be allocated sufficient time and personnel resources by the Contractor so that they can be accomplished within time allowed for project completion. These activities are necessary to assure detection of any deficiencies in the HVAC Systems and avoid warranty callbacks. Included for guidance at the end of this section is a flow chart (Figures 1 and 2) showing major activities and their chronological relationship to each other and to the Notice to Proceed and Contract Completion points. They are for guidance only - the Contractor shall refer to applicable specification sections for actual requirements for these activities.

3.3.3   Scheduled Project Completion

The schedule interval shall extend from notice-to-proceed to the contract completion date.

3.3.3.1   Project Start Date

The schedule shall start no earlier than the date that the Notice to Proceed (NTP) was acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project". The "Start Project" activity shall have: a "ES" constraint, a constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.3.2   Constraint of Last Activity

Completion of the last activity in the schedule shall be constrained by the contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path. The Contractor shall include as the last activity in the project schedule an activity call "End Project". The "End Project" activity shall have: a "LF" constraint, a constraint date equal to the completion date for the project, and a zero day duration.

3.3.3.3   Early Project Completion

In the event the project schedule shows completion, the project prior to the contract completion date, the Contractor shall identify those activities that have been accelerated and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Contractor shall specifically address each of the activities noted at every project schedule update period to assist the Contracting Officer to
evaluate the Contractor's ability to actually complete prior to the contract period.

3.3.4   Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

3.3.4.1   Start Phase

The Contractor shall include as the first activity for a project phase an activity called "Start Phase X" where "X" refers to the phase of work. The "Start Phase X" activity shall have: a "ES" constraint, a constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.4.2   End Phase

The Contractor shall include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have: a "LF" constraint, a constraint date equal to the completion date for the project, and a zero day duration.

3.3.4.3   Phase X

The Contractor shall include a hammock type activity for each project phase called "Phase X" where "X:" refers to the phase of work. The "Phase X" activity shall be logically tied to the earliest and latest activities in the phase.

3.3.5   Default Progress Data Disallowed

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the Actual Start and Finish dates on the Daily Quality Control report for every in progress or completed activity and insure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes.

3.3.6   Out-of-Sequence Progress

Activities that have posted progress without predecessors being completed (Out-of-Sequence

Progress) shall be allowed only by the case-by-case approval of the Contracting Officer. The Contracting Officer may direct that changes in schedule logic be made to correct any or all out-of-sequence work.

3.3.7   Extended Non-Work Periods

Designation of Holidays to account for non-work periods of over 5 days shall not be allowed. Non-work periods of over 5 days shall be identified by addition of activities that represent the delays. Modifications to the logic of the project schedule shall be made to link those activities that may have been impacted by the delays to the newly added delay activities.

3.3.8   Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

3.4   PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. The data disk, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

3.4.1   Preliminary Project Schedule Submission

The Preliminary Project Schedule, defining the Contractor's planned operations for the first 60 calendar days shall be submitted for approval within 10 calendar days after Notice to Proceed is acknowledged. The approved preliminary schedule shall be used for payment purposes not to exceed 60 calendar days after Notice to Proceed.

3.4.2   Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 40 calendar days after Notice to Proceed. The schedule shall provide a reasonable sequence of activities which represent work through the entire project and shall be at a reasonable level of detail.

3.4.3   Periodic Schedule Updates

Based on the result of progress meetings, specified in "Periodic Progress Meetings," the Contractor shall submit periodic schedule updates. These submissions shall enable the Contracting Officer or to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and project schedule data, which in the judgment of the Contracting Officer or authorized representative, is necessary for verifying the contractor's progress, the Contractor shall be deemed not to have provided an estimate upon which progress payment may be made.

3.4.4 Standard Activity Coding Dictionary

The Contractor shall submit, with the Initial Project Schedule, a coding scheme that shall be used throughout the project for all activity codes contained in the schedule. The coding scheme submitted shall list the values for each activity code category and translate those values into project specific designations. For example, a Responsibility Code Value, "ELE", may be identified as "Electrical Subcontractor." Activity code values shall represent the same information throughout the duration of the contract. Once approved with the Initial Project Schedule submission, changes to the activity coding scheme must be approved by the Contracting Officer's Representative.

3.5   SUBMISSION REQUIREMENTS

The following items shall be submitted by the Contractor for the initial submission, and every periodic project schedule update throughout the life of the project:

3.5.1   Data Disks

Two data disks containing the project schedule shall be provided. Data on the disks shall be in the format specified in Appendix A, " Standard Data Exchange Format".

3.5.1.1   File Medium

Required data shall be submitted on 3.5 disks, formatted to hold 1.44 MB of data, under the MS-DOS Version 5.0 operating system.

3.5.1.2   Disk Label

A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the type of schedule (Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number or person responsible for the schedule, and the MS-DOS version used to format the disk.

3.5.1.3   File Name

Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will insure that the names of the files submitted are unique. the Contractor shall submit the file naming convention to the Contracting Officer for approval.

3.5.2   Narrative Report

A Narrative Report shall be provided with each update of the project schedule. This report shall be provided as the basis of the Contractor's progress payment request. The Narrative Report shall include: a description of activities along the 4 most critical paths, a description of current and

anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken.

3.5.3 Approved Changes Verification

Only project schedule changes that have been previously approved by the Contracting Officer shall be included in the schedule submission. The Narrative Report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

3.5.4 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float. Actual Start and Actual Finish Dates shall be printed for those activities in-progress or completed.

3.5.4.1 Activity Report

A list of all activities sorted according to activity number or "I-NODE" AND "J-NODE" and then sorted according to Early Start Date. For completed activities the Actual Start Date shall be used as the secondary sort.

3.5.4.2 Logic Report

A list of Preceding and Succeeding activities for every activity in ascending order by activity number and then sorted according to Early Start Date. For completed activities the Actual Start Date shall be used as the secondary sort.

3.5.4.3 Total Float Report

A list of all activities sorted in ascending order of total float. Activities which have the same amount of total float shall be listed in ascending order of Early Start Dates.

3.5.4.4 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the Notice to Proceed until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. Activities shall be grouped by bid item and sorted by activity numbers. This report shall: sum all activities in a bid item and provide a bid item percent; complete and sum all bid items to provide a total project percent complete. The printed report shall contain, for each activity: [Activity Number] [or]

["i-node" and "j-node"], Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), Earnings to Date.

3.5.4.5   Labor Loading.

For each activity shown on the logic report list the total amount of work required for the activity in man-hours, the number of workers assigned to the activity, the expected production rate for a worker, and the length of time (in work days) required to render the expected completion date for the activity. Completion dates on this report must agree with those on the logic report.

3.5.5   Network Diagram

The network diagram shall be required on the initial schedule submission and on bi-monthly (60 days) schedule update submissions. In addition to other submission requirements, a single mylar reproduceable 20 inch by 30 inch size shall be submitted. The diagram shall also The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.5.1   Continuous Flow

Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity or event number, description, duration, and estimated earned value shall be shown on the diagram.

3.5.5.2   Project Milestone Dates

Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

3.5.5.3   Critical Path

  The critical path shall be clearly shown.

3.5.5.4   Banding

Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area and/or responsibility.

3.5.5.5   S-Curves

Earnings curves showing projected early and late earnings and earnings to date.

3.6   PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly on- site meeting or other regular intervals

mutually agreed to at the preconstruction conference. During this meeting the Contractor will describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. The Contracting Officer will approve activity progress, proposed revisions, and adjustments as appropriate.

3.6.1   Meeting Attendance

The Contractor's Project Manager and Scheduler shall attend the regular progress meeting.

3.6.2   Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than 4 working days after the monthly progress meeting.

3.6.3   Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost to Date shall be subject to the approval of the Contracting Officer. The following minimum set of items which the Contractor shall address, on an activity by activity basis, during each progress meeting.

3.6.3.1   Start and Finish Dates

The Actual Start and Actual Finish dates for each activity currently in-progress or completed activities.

3.6.3.2   Time Completion

The estimated Remaining Duration for each activity in-progress. Time-based progress calculations must be based on Remaining Duration for each activity.

3.6.3.3   Cost Completion

The earnings for each activity started. Payment shall be based on earnings for each in-progress or completed activity. Payment for individual activities shall not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

3.6.3.4   Logic Changes

All logic changes pertaining to Notice to Proceed on change orders, change orders to be incorporated into the schedule, contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, [lag durations,] and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

3.6.3.5   Other Changes

Other changes required due to delays in completion of any activity or group of activities are those delays beyond the Contractors control such as strikes and unusual weather. Also included are delays encountered due to submittals, Government Activities, deliveries or work stoppage which makes re-planning the work necessary, and when the schedule does not represent the actual prosecution and progress of the work.

3.7   REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the contract completion date, he shall furnish such justification, project schedule data and supporting evidence as the Contracting Officer may deem necessary for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals.

3.7.1   Justification of Delay

The project schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The Contracting Officer's determination as to the number of allowable days of contract extension, shall be based upon the project schedule updates in effect for the time period in question and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, shall not be a cause for a time extension to the contract completion date.

3.7.2   Submission Requirements

The Contractor shall submit a justification for each request for a change in the contract completion date of under two weeks based upon the most recent schedule update at the time of the Notice to Proceed or constructive direction issued for the change. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

    a. A list of affected activities, with their associated project schedule activity number.

    b. A brief explanation of the causes of the change.

    c. An analysis of the overall impact of the changes proposed.

    d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

3.7.3   Additional Submission Requirements

For any request for time extension for over 2 weeks, the Contracting Officer may request an interim update with revised activities for a specific change request. The Contractor shall provide this disk within 4 days of the Contracting Officer's request.

3.8   DIRECTED CHANGES

If Notice to Proceed (NTP) is issued for changes prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within 2 weeks of the NTP being issued. The proposed revisions to the schedule will be approved by the Contracting Officer prior to inclusion of those changes within the project schedule.   If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until the Contractor submits revisions, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, then the Contractor shall advise the Contracting Officer within 2 weeks of receipt of the revisions. Regardless of the objections, the Contractor will continue to update their schedule with the Contracting Officer's revisions until a mutual agreement in the revisions may be made. If the Contractor fails to submit alternative revisions within 2 weeks of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

3.9   OWNERSHIP OF FLOAT

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

----------------END OF SECTION---------------
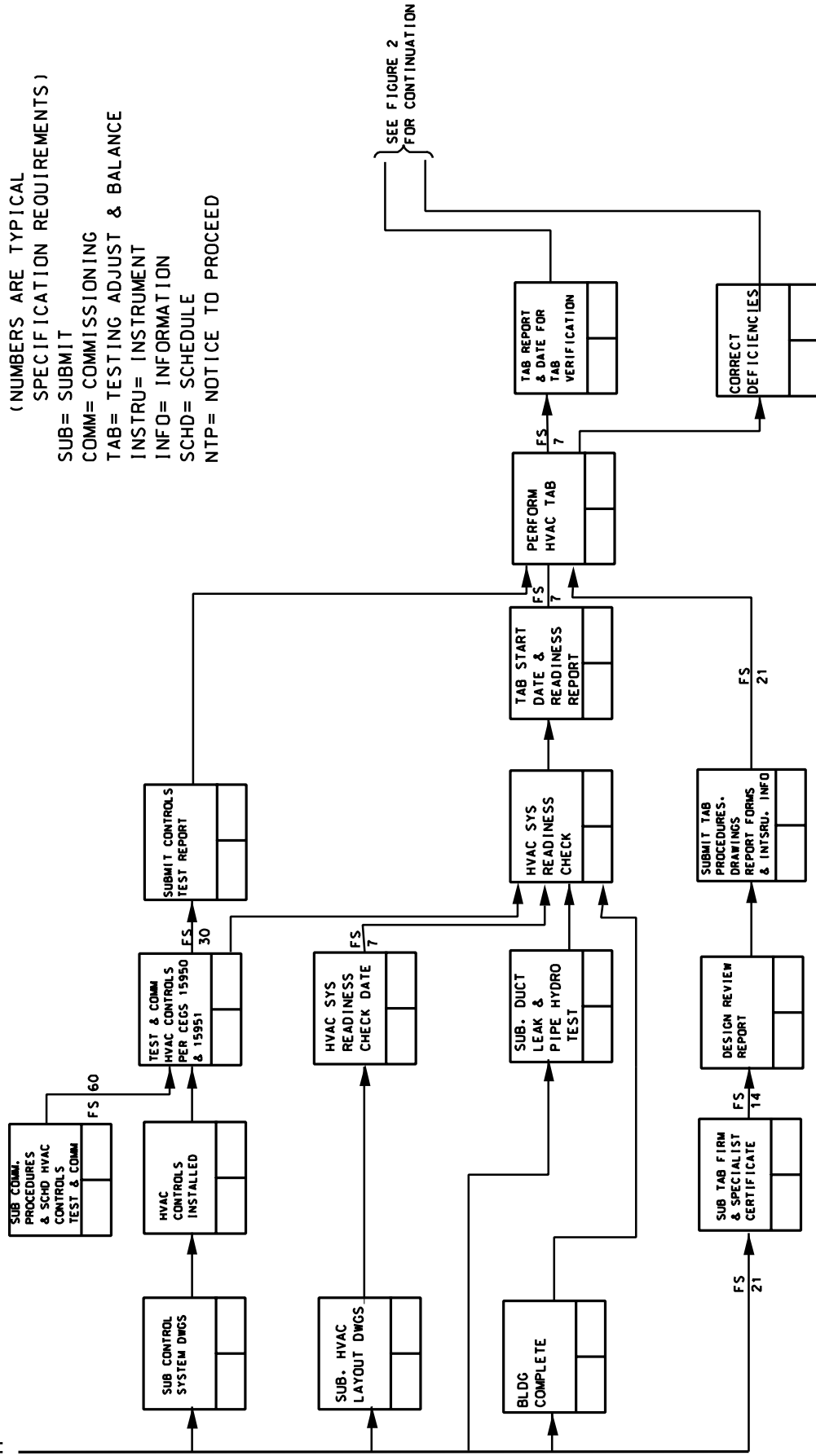
FIGURE 1

FLOW CHART FOR HVAC TESTING, BALANCING AND COMMISSIONING
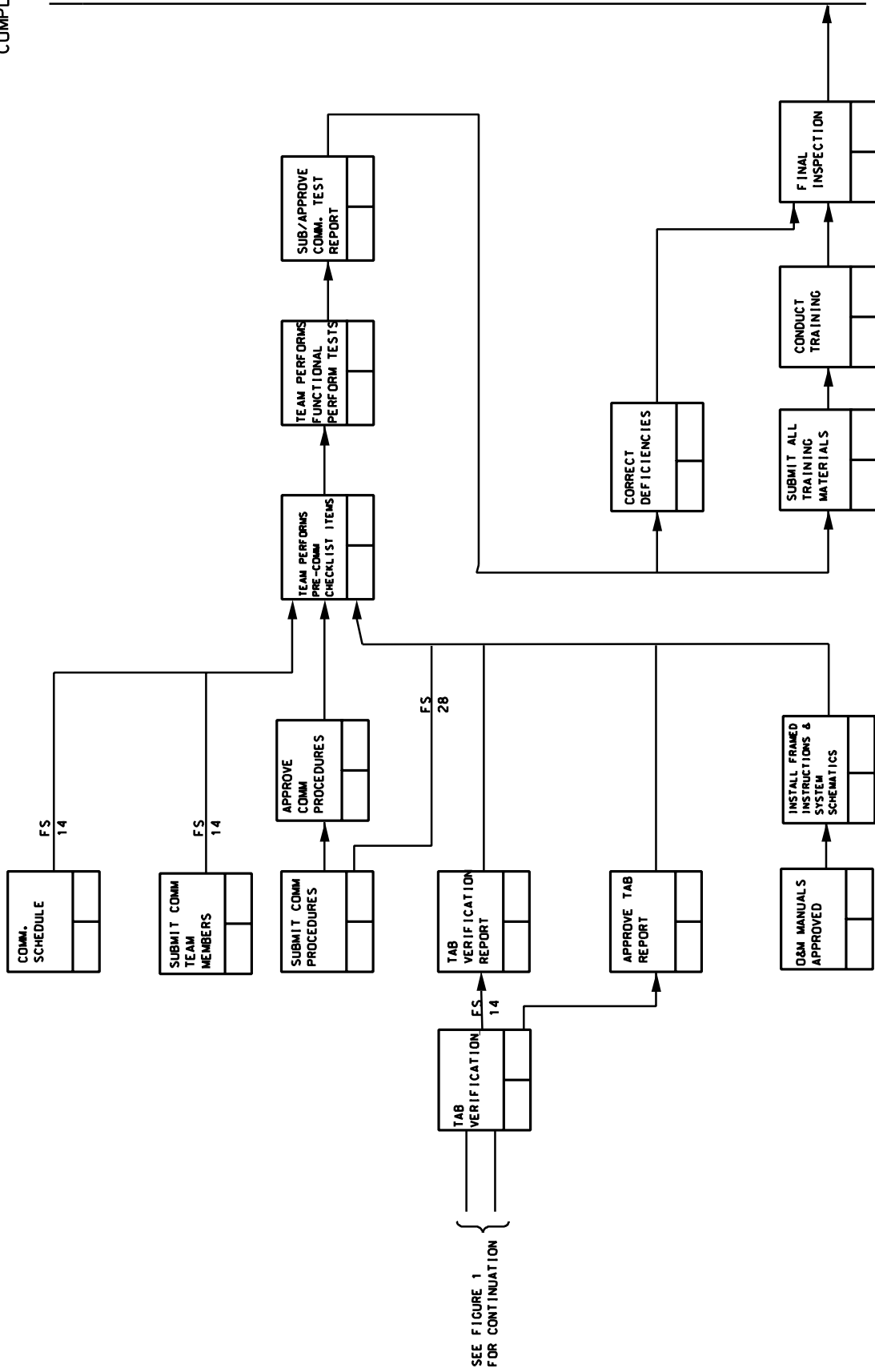
FIGURE 2

FLOW CHART FOR HVAC TESTING, BALANCING AND COMMISSIONING

SEE FIGURE 1
FOR CONTINUATION

STANDARD DATA EXCHANGE FORMAT SPECIFICATION

PART 1- GENERAL

1. Application of This Provision: The Standard Data Exchange Format (SDEF) provides a non-proprietary protocol to exchange project planning and progress data between scheduling systems.

2. File Type and Format: The data file shall consist of a 132 character, freed format, "ASCII" file. Text shall be left-justified and numbers shall be right-justified in each field. Data records must conform, exactly, to the sequence, column position, maximum length, mandatory values, and field definitions described below to comply with the SDEF. Unless specifically stated, all numbers shall be whole numbers. Fields containing numbers shall not be zero filled. All data columns shall be separated by a single blank column. The file shall not contain blank lines.

3. Usage Notes: Where appropriate, notes regarding proper usage of systems to support the SDEF have been included in brackets ([ ]). These notes are included to assist users in creating SDEF-compatible files, given the variety of software systems that support the SDEF.

4. Recommended Systems: Several systems have been tested to determine the accuracy of importing and exporting SDEF files. For information on the current list of recommended systems, please contact Mr. Stan Green at HQUSACE, (202) 761-0206. Although the currently listed system have been tested other systems may also be acceptable provided those systems correctly import and export SDEF files.

5. SDEF Checker Program: A program that checks whether a file meets the SDEF is available free of charge. A copy of this program may be obtained by written request to: U.S. Army Corps of Engineers, ATTN: Mr. Bill East (CECER-FFA), P.O. Box 9005, Champaign, IL 61826-90005. A description of the SDEF Checker is also available on the Internet and CivilNet.

PART 2- SDEF SPECIFICATION

6. SDEF Organization: The SDEF shall consist of the following records provided in the exact sequence shown below:

Paragraph Reference	Record Description	Remarks
6.a	Volume Record	Mandatory First Line of File
6.b	Project Record	Mandatory Second Line of File
6.c	Calendar Record(s)	Mandatory One Record Minimum
6.d	Holiday Record(s)	Mandatory if Holidays Used
6.e	Activity Record(s)	Mandatory Records
6.f	Precedence Record(s)	Mandatory for Precedence
6.g	Unit Cost Record(s)	Mandatory for Unit Costs
6.h	Progress Record(s)	Mandatory Records
6.i	File End Record	Mandatory Last Line of Disk/File

6.a. Volume Record: The Volume Record shall be used to control the transfer of data that may not fit on a single disk. The first line in every file used to store SDEF data shall be the Volume Record. The Volume Record shall sequentially identify the number of the data transfer disk(s). The Volume Record shall have the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 -4	4	VOLM	Fixed	Filled
DISK NUMBER	6 -7	2	√	Number	Right Justified

6.a.(l) The RECORD IDENTIFIER is the first four characters of this record. The required value for this field shall be "VOLM". The VOLM record must appear on the first line of the SDEF data file.

6.a.(2) The DISK NUMBER field shall identify the number of the data disk used to store the data exchange information. If all data may be contained on a single disk, this field shall contain the value of "l". If more disks are required, then the second disk shall contain the value "2", the third disk shall be designated with a "3", and so on. Identification of the last data disk is accomplished in the Reject End Record.

6.b. Project Record: The Project Identifier Record shall contain general project information. Because more than one SDEF file may be required for data transfer between large projects, the PROJ record shall be the second line of the first SDEF file transferred. The PROJ record shall contain information in the following format:

	Column	Max.	Req.		
Description	Position	Len.	Value	Type	Notes
RECORD IDENTIFIER	1 - 4	4	PROJ	Fixed	Filled
DATA DATE	6 - 12	7	√	ddmmmyy	Filled
PROJECT IDENTIFIER	14 -17	4	√	Alpha.	Left Justified
PROJECT NAME	19 - 66	48	√	Alpha.	Left Justified
CONTRACTOR NAME	68 - 103	36	√	Alpha.	Left Justified
ARROW OR PRECEDENCE	105 - 105	1	A,P	Fixed	Filled
CONTRACT NUMBER	107 - 112	6	√	Alpha.	Left Justified
PROJECT START	114 - 120	7	√	ddmmmyy	Filled
PROJECT END	122 - 128	7	√	ddmmmyy	Filled

6.b.(1) The RECORD IDENTIFIER is the first four characters of this record. The required value for this field shall be "PROJ". This record shall contain the general project information and indicates which scheduling method shall be used.

6.b.(2) The DATA DATE is the date of the schedule calculation. The abbreviation "ddmmmyy" refers to a date format that shall translate a date into two numbers for the day, three letters for the month, and two numbers for the year. For example, March 1, 1999 shall be translated into OlMar99. This same convention for date formats shall be used throughout the entire data format. To ensure that dates are translated consistently, the following abbreviations shall be used for the three character month code:

Abbreviation	Month
JAN	January
FEB	February
MAR	March
APR	April
MAY	May
JUN	June
JUL	July
AUG	August
SEP	September
OCT	October
NOV	November
DEC	December

6.b.(3) The PROJECT IDENTIFIER is a maximum four character abbreviation for the schedule. These four characters shall be used to uniquely identify the project and specific update as agreed upon by Contractor and Contracting Officer. When utilizing scheduling software these four characters shall be used to select the project. Software manufacturers shall provide information to users to ensure that data importing programs do not automatically overwrite other schedules with the same PROJECT IDENTIFIER.

6.b.(4) The PROJECT NAME field shall contain the name and location of the project edited to fit the space provided. The data appearing here shall appear on scheduling software reports. The abbreviation "Alpha." refers to an "Alphanumeric" field value and shall be used throughout the remainder of this specification.

6.b.(5) The CONTRACTOR NAME field shall contain the Construction Contractor's name, edited to fit the space provided.

6.b.(6) The ARROW OR PRECEDENCE field shall indicate which method shall be used for calculation of the schedule. The value "A" shall signify the Arrow Diagramming Method. The value "P" shall signify the Precedence Diagramming Method. The ACTIVITY ID field of the Activity Record shall be interpreted differently depending on the value of this field. The Precedence Record shall be required if the value of this field is "P". [Usage note: software systems may not support both arrow and precedence diagramming. It is recommended that the selection of the type of network be based on the capabilities of the software used by project partners.]

6.b.(7) The CONTRACT NUMBER field shall contain the contract number for the project. For example, the construction contract number DACA85-89-C-0001 shall be entered into this field as "890001".

6.b.(8) The PROJECT START field shall contain the date that the Contractor acknowledges the Notice to Proceed (NTP). [Usage note: Software systems may use a project start date to constrain the first activity of a network. To ensure consistent scheduling calculations across products, it is recommended that the first activity in the schedule contain an EARLY START constraint and a software system's PROJECT START date only be used to report on the project's start date.]

6.b.(9) The PROJECT END field shall contain the date that the Contractor plans to complete the work as approved by the Contracting Officer. [Usage note: software systems may use a project end date to constrain the last activity of a network. To ensure consistent scheduling calculations across products, it is recommended that the last activity in the schedule contain an EARLY START constraint and a software system's PROJECT END date only be used to report on the project's end date.]

6.c. Calendar Record: The Calendar Record(s) shall follow the Project Identifier Record in the first disk of data transferred. A minimum of one Calendar Record shall be required for all data exchange activity files. The format for the Calendar Record shall be as follows:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 - 4	4	CLDR	Fixed	Filled
CALENDAR CODE	6 - 6	1	√	Alpha.	Filled
WORKDAYS	8 -14	7	SMTWTFS	Fixed	Filled
CALENDAR DESCRIPTION	16 - 45	30	√	Alpha.	Left Justified

6.c.(1) The RECORD IDENTIFIER shall always begin with "CLDR" to identify it as a Calendar Record. Each Calendar Record used shall have this identification in the first four columns. [Usage note: Systems contain a variety of calendar options. It is recommended that the least common denominator of calendar features between the systems be used as the basis for creating the SDEF file for a given project.]

6.c.(2) The CALENDAR CODE shall be used in the activity records to signify that this calendar is associated with the activity. [Usage note: Some systems do not allow for alphanumeric CALENDAR CODES, but only allow positive integers from 1 to 9. It is recommended that only positive integers be used for the CALENDAR CODE field to support the widest variety of scheduling systems.]

6.c.(3) The WORKDAYS field shall contain the work-week pattern selected with "Y", for Yes, and "N", for No. The first character shall be Sunday and the last character Saturday. An example of a typical five (5) day work-week would be NYYYYYN. A seven (7) day work-week would be YYYYYYY.

6.c.(4) The CALENDAR DESCRIPTION shall be used to briefly describe the calendar used.

6.d. Holiday Record: The Holiday Record(s) shall follow the Calendar Record(s) in the first disk of data transferred. There may be calendars without any holidays designated or several Holiday Records for each Calendar Record(s). The format for the Holiday Record shall be as follows:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 – 4	4	HOLI	Fixed	Filled
CALENDAR CODE	6 – 6	1	√	Alpha.	Filled
HOLIDAY DATE	8 – 14	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	16 – 22	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	24 – 30	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	32 – 38	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	40 – 46	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	48 – 54	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	56 – 62	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	64 – 70	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	72 – 78	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	80 – 86	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	88 – 94	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	96 – 102	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	104 – 110	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	112 – 118	7	-	ddmmmyy	May be Filled
HOLIDAY DATE	120 – 126	7	-	ddmmmyy	May be Filled

6d.(1) The RECORD IDENTIFIER shall always begin with "HOLI". Each Holiday Record used shall have this identification in the first four columns.

6.d.(2) The CALENDAR CODE indicates which work-week calendar the holidays shall be applied to. More than one HOLI record may be used for a given CALENDAR CODE.

6.d.(3) The HOLIDAY DATE shall contain the date of each individual non-work day.

6.e. Activity Records: Activity Records shall follow any Holiday Record(s). If there are no Holiday Record(s), then the Activity Records shall follow the Calendar Record(s). There shall be one Activity Record for every activity in the network. Each activity shall have one record in the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 – 4	4	ACTV	Fixed	Filled
ACTIVITY ID	6 – 15	10	√	Integer	See Comment Below
ACTIVITY DESCR.	17-46	30	√	Alpha.	Left Justified
ACTIVITY DURATION	48-50	3	√	Integer	Right Justified
CONSTRAINT DATE	52-58	7		ddmmmy	May be Filled
CONSTRAINT TYPE	60-61	2		ES or LF	May be Filled
CALENDAR CODE	63-63	1	√	Alpha.	Filled
HAMMOCK CODE	65-65	1	Y, blank	Fixed	May be Filled
WORKERS PER DAY	67-69	3		Integer	Right Justified
RESPONSIBILITY CODE	71-74	4		Alpha.	Left Justified
WORK AREA CODE	76-79	4		Alpha.	Left Justified
MOD OR CLAIM NO.	81-86	6		Alpha.	Left Justified
BID ITEM	88-93	6		Alpha.	Left Justified
PHASE OF WORK	95-96	2		Alpha.	Left Justified
CATEGORY OF WORK	98-98	1		Alpha.	May be Filled
FEATURE OF WORK	100-128	30		Alpha.	Left Justified

6.e.(1) The RECORD IDENTIFIER for each activity description record must begin with the four character "ACTV" code. This field shall be used for both the Arrow Diagram Method (ADM) and Precedence Diagram Method (PDM),

6.e.(2) The ACTIVITY ID consists of coding that shall differ, depending on whether the ADM or PDM method was selected in the Project Record. If the ADM method was selected then the field shall be interpreted as two right-justified fields of five (5) integers each. If the PDM method was selected the field shall be interpreted as one (1) right-justified field of ten (10) integers each. The maximum activity number allowed under this arrangement is 99999 for ADM and 9999999999 for the PDM method. [Usage note: Many systems allow alphanumeric ACTIVITY IDs. While the SDEF does not strictly, allow the use of alphanumeric values, users may agree to use the ACTIVITY ID field to exchange alphanumeric data. It is recommended that the ACTIVITY ID be restricted to integers when one or more of the systems being used for scheduling allows only integer ACTIVITY ID values.]

6.e.(3) The ACTIVITY DESCRIPTION shall be a maximum of 30 characters. Descriptions must be limited to the space provided.

6.e.(4) The ACTIVITY DURATION contains the estimated original duration for the activity on the schedule. The duration shall be based upon the work-week designated by the activity's related calendar.

6.e.(5) The CONSTRAINT DATE field shall be used to identify a date that the scheduling system may use to modify float calculations. If there is a date in this field, then there must be a valid entry in the CONSTRAINT TYPE field.

6.e.(6) The CONSTRAINT TYPE field shall be used to identify the way that the scheduling system shall use the CONSTRAINT DATE to modify schedule float calculations. If there is a value in this field, then there must be a valid entry in the CONSTRAINT DATE field. The valid values for the CONSTRAINT TYPE are as follows:

Code	Definition
ES	The CONSTRAINT DATE shall replace an activity's early start date, if the early start date is prior to the CONSTRAINT DATE.
LF	The CONSTRAINT DATE shall replace an activity's late finish date, if the late finish date is after the CONSTRAINT DATE.

[Usage note: Systems provide a wide variety of constraint types that may not be supported by other systems. It is recommended that constraint types be restricted to the values above regardless of the capabilities of the various systems being used for scheduling.]

6.e.(7) The CALENDAR CODE relates this activity to an appropriate work-week calendar. The ACTIVITY DURATION must be based on the valid work-week referenced by this CALENDAR CODE field.

6.e.(8) The HAMMOCK CODE indicates that a particular activity does not have its own independent duration, but takes its start dates from the start date of the preceding activity (or node) and takes its finish dates from the finish dates of its succeeding activity (or node). If the value of the HAMMOCK CODE field is "Y", then the activity is a hammmock activity.

6.e.(9) The WORKERS PER DAY shall contain the average number of workers expected to work on the activity each day the activity is in progress. If this code is required by project scheduling specifications, values for this data will be right justified. Activities without workers per day shall have a value of "0".

6.e.(10) The RESPONSIBILITY CODE shall identify the subcontractors or major trade involved with completing the work for the activity. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(11) The WORK AREA CODE shall identify the location of the activity within the project. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(12) The MOD OR CLAIM NUMBER shall uniquely identify activities that are added or changed on a construction contract modification, or activities that justify any claimed time extensions. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(13) The BID ITEM shall identify the bid item number associated with each activity. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(14) The PHASE OF WORK shall identify the timing of a specific activity within the entire project. If this code is required by project scheduling specifications, value for this data will be left justified.

6.e.(15) The CATEGORY OF WORK shall identify the general type of work performed by every activity. If this code is required by project scheduling specifications, value for this data will be placed in the field.

6.e.(16) The FEATURE OF WORK shalI identify a very broad designation of the general type of work that is being accomplished by the activity. If this code is required by project scheduling specifications, value for this data will be left justified. [Usage note: Many systems require that FEATURE OF WORK values be placed in several activity code fields. It is recommended that users review SDEF documentation to determine the correct way to use a given software system to produce the FEATURE OF WORK code.]

6.f. Precedence Record: The Precedence Record(s) shall follow the Activity Records if a Precedence Diagram Method schedule (PDM) is identified in the ARROW OR PRECEDENCE field of the Project Record. The Precedence Record has the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 – 4	4	PRED	Fixed	Filled
ACTIVITY ID	6 – 15	10	√	Integer	See Comment Below
PRECEDING ACTIVITY	17-26	10	√	Integer.	See Comment Below
PREDECESSOR TYPE	28-28	1	√	S, F, C	Filled
LAG DURATION	30-33	4	√	Integer	Right Justified

6.f.(1) The RECORD IDENTIFIER shall begin with the four characters "PRED" in the first four columns of the record.

6.f.(2) The ACTIVITY ID identifies the activity whose predecessor shall be specified in this record.

6.f.(3) The PRECEDING ACTIVITY number is the number of an activity that precedes the activity noted in the ACTIVITY ID field.

6.f.(4) The PREDECESSOR TYPE field indicates the type of relation that exists between the chosen pair of activities. Valid PREDECESSOR TYPE fields areas follows:

Code	Definition
S	Start-to-Start relation
F	Finish-to-Finish relation
C	Finish-to-Start relation

[Usage note: Some systems provide additional predecessor types that may not be supported by all other systems. It is recommended that predecessor types be restricted to the values above regardless of the capabilities of the various systems being used for scheduling.]

6.f.(5) The LAG DURATION field contains the number of days delay between the preceding and current activity. [Usage note: Some systems allow negative values for the LAG DURATION. Because these values are not supported by all other systems, it is recommended that values be restricted to zero and positive integers.]

6.g. Unit Cost Record: The Unit Cost Record shall follow all Precedence Records. If the schedule utilizes the Arrow Diagram Method, then the Unit Cost Record shall follow any Activity records. There shall be one Unit Cost Record for every activity that is not a lump sum activity. [Usage note: (1) It is recommended that users who wish to exchange unit cost data contact SDEF vendor representatives to determine the ability of the software system to import/export unit cost information. (2) If the software being used by each member of the project team supports unit cost data then users may wish to conduct a trial run of the SDEF data exchange with a two or three-activity network to ensure that unit cost data transfers as expected. If problems are found please consult vendor representatives for resolution prior to exchange of full project schedules. (3) Unit cost record data does not, in most systems, result in the correct values being placed in the ACTIVITY COST and COST TO DATE fields of the Progress (PROG) Record. Users must, at this time, manually transfer the data from the Unit Cost Record to the Progress Record.

The fields for this record shall take the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 – 4	4	UNIT	Fixed	Filled
ACTIVITY ID	6 – 15	10	√	Integer	Right Justified
TOTAL QTY	17-29	13	√	Format 8.4	Right Justified
COST PER UNIT	31- 43	13	√	Format 8.4	Right Justified
QTY TO DATE	45 –57	13	√	Format 8.4	Right Justified
UNIT OF MEASURE	59 – 61	3	√	Alpha.	Left Justified

6.g.(1) The RECORD IDENTIFIER shall be identified with the four characters 'UNIT" placed in the first four columns of the record.

6.g.(2) The ACTIVITY ID for each activity shall match the format described in the activity record. Each activity may have only one Unit Cost Record.

6.g.(3) The TOTAL QTY is the total amount of material to be used in this activity. This number consists of eight digits, one decimal point and four more digits. An example of a number in this format is "11111111.1111". If decimal places are not needed this field shall still contain a ".0000" in columns 25-29. [Usage note: Many systems support a different format for this value that does not include as many decimal places. It is recommended that users determine their requirements for significant digits based on the lowest common denominator of the software systems being used for a given project.]

6.g.(4) The COST PER UNIT is the cost, in dollars and cents, for each unit to be used in this activity. This number consists of eight digits, one decimal point, and four more digits. An example of a number in this format is "11111111.1111". If decimal places are not needed this field shall still contain a ".0000" in columns 39-43. [Usage note: Many systems support a different format for this value that does not include as many decimal places. It is recommended that users determine their requirements for significant digits based on the lowest common denominator of the software systems being used for a given project.]

6.g.(5) The QTY TO DATE is the quantity of material installed in this activity up to the data date. This number consists of eight digits, one decimal point, and four more digits. An example of a number in this format is "11111111.1111". If decimal places are not needed this field shall still contain a ".0000" in columns 53-57. [Usage note: Many systems support a different format for this value that does not include as many decimal places. It is recommended that users determine their requirements for significant digits based on the lowest common denominator of the software systems being used for a given project.]

6.g.(6) The UNIT OF MEASURE is an abbreviation that may be used to describe the units being measured for this activity. Valid values for this field are any meaningful English or metric unit, except "LS" for Lump Sum. Lump Sum activities are not to have Unit Cost Records.

6.h. Progress Record: Progress Record(s) shall follow all Unit Cost Record(s). If there are no Unit Cost Record(s), then the Progress Record(s) shall follow all Precedence Records. If the schedule utilizes the Arrow Diagram Method, then the Progress Record shall follow any Activity Records. One Progress Record is required for every activity in the Activity Record. The fields for this Record shall be provided in the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 – 4	4	PROG	Fixed	Filled
ACTIVITY ID	6 – 15	10	√	Integer	See Comment Below
ACTUAL START DATE	17 – 23	7	√	ddmmmyy	Filled if Started
ACTUAL FINISH DATE	25 – 31	7	√	ddmmmyy	Filled if Finished
REMAINING DURATION	33 – 35	3	√	Integer	Right Justified
ACTIVITY COST	37 – 48	12	√	Format 9.2	Right Justified
COST TO DATE	50 – 61	12	√	Format 9.2	Right Justified
STORED MATERIAL	63 – 74	12	√	Format 9.2	Right Justified
EARLY START DATE	76 – 82	7	√	ddmmmyy	Filled if Not Started
EARLY FINISH DATE	84 – 90	7	√	ddmmmyy	Filled if Not Finished
LATE START DATE	92 – 98	7	√	ddmmmyy	Filled if Not Started
LATE FINISH DATE	100 – 106	7	√	ddmmmyy	Filled if Not Finished
FLOAT SIGN	108 – 108	1	+, −	Fixed	Filled if Not Finished
TOTAL FLOAT	110 – 112	3	√	Integer.	R. Just. if Not Finished

6.h.(1) The RECORD IDENTIFIER shall begin with the four characters "PROG" in the first four columns of the record.

6.h.(2) The ACTIVITY ID for each activity for which progress has been posted shall match the format described in the Activity Record.

6.h.(3) An ACTUAL START DATE is required for alI in-progress activities. The ACTUAL START DATE shall be the same as, or later than, the PROJECT START date contained in the Project Record. The ACTUAL START DATE shall also be the same as, or prior to, the DATA DATE contained in the Project Record. If there is an ACTUAL START DATE for an activity that there must also be a REMAINING DURATION, and the values for the EARLY START DATE and LATE START DATE are blank. [Usage note: Some systems allow default values for ACTUAL START DATE if the date is not entered by the user. Because the failure to include a start date for activities may result in different schedule calculations, it is recommended that the ACTUAL START DATE be required for all activities in progress.]

6.h.(4) An ACTUAL FINISH DATE is required for all completed activities. If the REMAINING DURATION of an activity is zero, then there must be an ACTUAL FINISH DATE. If there is an ACTUAL FINISH DATE, then values for the EARLY START DATE, LATE START DATE, EARLY FINISH DATE, LATE FINISH DATE, FLOAT SIGN, and TOTAL FLOAT shall be blank. [Usage note: Some systems allow default values for ACTUAL FINISH DATE if the date is not entered by the user. Because the failure to include a finish date for activities may result in different schedule calculations, it is recommended that the ACTUAL FINISH DATE be required for all activities in progress.]

6.h.(5)A REMAINING DURATION is required for all activities. Activities that have not started shall have a remaining duration equal to their original duration. Activities completed based G DURATION. [Usage note: Systems have a variety of on time, shall have a zero (0) REMAININ DURATION value. It is recommended that users "short-cut" methods to determine the REMAINING actually consider the time required to complete the remaining work on a given task, rather than allow a system to calculate the remaining duration based on the amount of work that has already been accomplished.]

6.h.(6) The ACTIVITY COST contains the estimated earned value of the work to be accomplished in the activity. An example of a number in this format is "1111111 11.11". If decimal places are not needed this field shall still contain a ".00" in the last three columns of this field. [Usage note: Users should inquire of software vendors if the user needs to add a zero in the data field to produce the default value "0.00".]

6.h.(7) The COST TO DATE contains the earned value for the activity. If there is an ACTUAL START DATE, then there must also be some value for COST TO DATE. An example of a number in this format is "111111111.11". If decimal places are not needed, this field shall still contain a ".00" in the last three columns of this field. The COST TO DATE is not tied to REMAINING DURATION. For example, if the REMAINING DURATION is "0", the COST TO DATE may only be 95% of the ACTIVITY COST. This difference may be used to reflect 5% retainage for punch list items. [Usage note: Systems implement cost information in different ways. It is recommended that users carefully review SDEF documentation and test results to determine how to ensure that SDEF data is exported correctly.]

6.h.(8) The STORED MATERIAL field contains the value of the material that the Contractor has paid for and is on site or in secure storage areas that is a portion of the COST TO DATE. An example of a number in this format is "111111111.11". If decimal places are not needed, this field shall still contain a ".00" in the last three columns of this field. [Usage note: Systems implement the stored materials field in a variety of ways. Many systems do not enforce STORED MATERIAL + COST TO DATE < ACTIVITY COST. To avoid potential confusion between systems, it is recommended that new activities be added to a schedule to reflect the cost of large equipment procurement rather than use the STORED MATERIALS field.]

6.h.(9) The EARLY START DATE indicates the earliest date possible that an activity can start as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL START DATE, then this field shall be blank.

6.h.(10) The EARLY FINISH DATE indicates the earliest date possible that an activity can finish as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL FINISH DATE, then this field shall be blank.

6.h.(11) The LATE START DATE indicates the latest date that an activity can begin as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL START DATE, then this field shall be blank.

6.h.(12) The LATE FINISH DATE indicates the latest date that an activity can finish as calculated by a CPM scheduling system or other Contracting Officer approved planning method. If the progress record for an activity contains an ACTUAL FINISH DATE, then this field shall be blank.

6.h.(13) The FLOAT SIGN indicates whether the float time calculated using a CPM scheduling system or other Contracting Officer approved planning method, is positive or negative in nature. If the progress record for an activity contains an ACTUAL FINISH DATE, then this field shall be blank. In the case of zero float this field shall be blank.

6.h.(14) The TOTAL FLOAT indicates the total float time. In the Precedence Diagram Method (PDM), the total float is the difference between the early and late start or finish dates. In the Arrow Diagram Method (ADM), the total float is equal to the late event time at the end of the activity, minus the sum of the early event time at the start of the activity plus the duration of the activity.

6.i. Project End Record: The Project End Record shall be used to identify that the data file is completed. If the ASCII End of File character is encountered, then data import programs shall use that character to infer that the data continues on the next disk. The user shall then be prompted for the next disk number, based on the VOLM record data. The Project End Record shall be the last record of the entire data file, and shall have the following format:

Description	Column Position	Max. Len.	Req. Value	Type	Notes
RECORD IDENTIFIER	1 – 3	3	END	Fixed	Filled

6.i.(1) The RECORD IDENTIFIER for the Project End Record shall be "END". Data contained in the data exchange file that occurs after this record shall not be used.